

Botany.—M. A. Steinheil (the late) on opposite leaves which become alternate by union.—Arendt on the capillary action of hairs (from the 'Flora').—M. Desmazières on Cryptogamia new to France.—M. Tulasne on French *Lycoperdaceæ*.

July.—*Zoology*.—M. Serres on the human allantoid.—M. d'Orbigny on the Gasteropoda of the Cretaceous system. Of 325 species found in the cretaceous strata of France, 250 are new. Out of the total, 81 species belong to the Neocomian (the lowest portion of the Lower Greensand) and 9 to the "Aptien," which two divisions form together the "Étage Néocomien" of D'Orbigny, a name equivalent to the Lower Greensand of Dr. Fitton. To the "Albien," *i. e.* the Gault, belong 77 species; to the "Turonien," *i. e.* Upper Greensand, 134; and to the "Senonien," *i. e.* white chalk, 24. Each geological group is marked by an assemblage of peculiar species. The new names given by M. d'Orbigny to the groups will appear to most geologists useless and inconvenient: it is a relic of an old, but very bad habit of French naturalists.—Experimental researches on Inanition, by Dr. Chossat.

Botany.—M. Mirbel on the anatomy of the Date-Palm.—M. Gaudichaud's reply to M. Mirbel.—M. A. Meyer on the *Daphnaceæ* (from the 'Bulletin' of the Moscow Academy).—M. Bojer on new plants from the South African Islands.—M. Schrenk on new *Chenopodiaceæ* and *Staticeæ* (from the 'Bulletin' of the Moscow Academy).

Aug.—*Zoology*.—M. Matteucci on muscular electricity, 2nd part.—M. Bischoff on the detachment and fecundation of the human egg and of the eggs of Mammalia.—Physiological studies on menstruation, by M. Raciborsky.—M. Lereboullet on the *Ligidium Persoonii* of Brandt. With plates.

Botany.—Note on the distinctive characters which separate vegetables from animals, and on mineral secretions in plants, by M. Payen. The author, by chemical analysis, comes to the same conclusions which M. Decaisne arrived at by organographical research, viz. that *Coralina officinalis*, *Halimeda*, *Opuntia* and their allies are vegetables and true Algæ.—Dr. Montagne on the tribe of *Podaxineæ*, and on *Gyrophragmium*, a new genus of that tribe.—Conspectus generis *Gaillonina*, by Count Jaubert and M. E. Spach.—On some new plants of Abyssinia, by M. Raffineau Delile.—M. Bojer's descriptions of rare plants from the islands of Southern Africa.—Prof. Bernhardt on the metamorphosis of plants (from the 'Flora' of 1843).

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

Dec. 27, 1842 (*continued*).—Richard Owen, Esq., Vice-President, in the Chair.

Mr. Fraser exhibited a specimen of the *Galago Senegalensis*, procured at Cape Coast, Western Africa, and a new species of Shrew from Fernando Po, which he characterized as follows:—

SOREX (CROCIDURA) POENSIS. *Sor. obscure fuscus, corpore subtus*

cinereo, pedibus nigrescentibus; auribus parvulis, distinctis; caudâ corpore breviori pilis obscuris adpressis, et setis longioribus adspersis.

	unc.	lin.
Longitudo ab apice rostri ad caudæ basin . . .	3	3
———— caudæ	1	10
———— tarsi digitorumque	0	6
———— ab apice rostri ad basin auris . . .	0	10

Hab. Clarence, Fernando Po.

This species somewhat resembles the *Sorex varius* of Smuts, but is of a deeper hue. The upper parts of the body are of a deep brown colour, rather indistinctly variegated with greyish; the body beneath is grey, but slightly washed, as it were, with dirty yellow. The ears are distinct, that is, not hidden by the fur, as in *S. tetragonurus* and its allies, and the tail has long bristly hairs interspersed with the short adpressed fur, as in the subgenus *Crocidura*, Wägler.

The specimen was taken in a trap baited with flesh, on the elevated land of Point William.

Mr. Fraser observed that the specimen exhibited of *Galago Senegalensis* was shot at Cape Coast, Western Africa, in a tamarind tree, near the top of which he found its nest: this was composed of loose leaves arranged in the fork of a branch. The eyes were large and prominent, and the movements of the animal were slow, and consequently very unlike the true Lemurs.

Specimens of the *Galago Alleni* and *G. Maholi* were placed on the table for comparison.

A paper was then read, from M. Petit de la Saussaye, containing descriptions of new species of Shells, belonging to the genus *Auricula*, collected by H. Cuming, Esq.

AURICULA TORNATELLIFORMIS. *Aur. testâ oblongo-acutâ, sub epidermide flavescente albidd, transversim tenuissimè striatâ, et rugis longitudinalibus levissimis obsoletè granulosa; spirâ conico-acutâ, lucidâ; anfractibus octonis subconvexis, ultimo magno supra medium ventricosò; columellâ infernè buplicatâ; labro supernè arcuatim emarginato.*

Long. 24 millim.; larg. 10½ millim.

Hab. Tanhay, isle of Negros, Philippines. Found at the roots of mangrove-trees.

AURICULA DOLIOLUM. *Aur. testâ ovatâ, transversim tenuè et regulariter sulcatâ, striis longitudinalibus et irregularibus subpunctatâ, sordidè rufo-fusca, ultimo anfractu pallidiore albido-cinerascente, angustè plùs minùsve fasciatâ; anfractibus 6-7; aperturâ ovatâ intùs fusco-purpurascente; columellâ buplicatâ, supernè obsoletissimè dentatâ; umbilico rumali; labro albo, intùs incrassato, tridentato, dente mediano majori, inferiori obsoleto.*

Long. 10 millim.; larg. 5½ millim.

Hab. Sinaï, province of North Ilocos, island of Luzon. Found on decayed wood, salt water.

AURICULA RECLUSIANA. *Aur. testâ ovato-oblongâ, griseo virescente,*

spirâ conicâ, apice obtusâ, erodâ; anfractibus senis, planiusculis, unoquoque in superiorem imbricante, sub suturâ depressiusculo; umbilico nullo; aperturâ subovatâ intus fusco-purpurascente; columellâ triplicatâ, plicâ superiori, latiori, lamelliformi, mediâ mediocri, inferiori minori; labro lævigato, intus zonâ albâ, subcalloso.

Long. 16 millim.; larg. 8 millim. vix.

Hab. Island of Tumaco, West Colombia.

AURICULA PIRIFORMIS. *Aur. testâ subpiriformi, lævigatâ, fuscâ, sub epidermide viridi-cinerascente; anfractibus 7-8; spirâ breviconicâ, rotundatâ, apice acuto, nigro; aperturâ oblongâ, intus fusco-violaceo; columellâ 5-plicatâ, plicis superioribus obsoletis, medianâ robustiori, lamelliformi, inferiori robustâ, subscendente, posticè circulari; labro acuto, pallidè emarginato, intus 2-6 tenuiter striato.*

Long. 20 millim.; larg. 9 millim.

Hab. Tumaco island, West Colombia.

The number of striæ or folds on this shell varies, but most frequently there are five.

AURICULA CEYLONICA. *Aur. testâ ovatâ, supernè obtusè angulatâ, glabrâ fusco-viridescente, fasciis albis vel cinereis angustis cinctâ, anfractibus 8-9, planulatis; spirâ conico-depressiusculâ, apice nigrescente; columellâ triplicatâ, plicâ superiori albâ, crassiusculâ, lamelliformi, subtus parvulâ, inferiori circulari; labro acuto, longè et profundè intus sulcato, ad marginem fusco, levi.*

Long. 15 millim.; larg. 10 millim.

Mr. Cuming possesses specimens which are of large size.

Hab. Ceylon.

Very fine striæ are sometimes perceptible upon half of the last whorl of this shell; the base of the columella is of a livid fawn-colour.

AURICULA PULCHELLA. *Aur. testâ parvulâ, ovato-acutâ, nitidâ pellucidâ albicante, transversim fusco-zonatâ, lineis longitudinalibus rectis seu undulatis, æquidistantibus, zonas transversas secantibus, eleganter pictâ; anfractibus 6-7; spirâ conico-acutâ, fuscâ, apice mammillari; columellâ triplicatâ, plicis superioribus parvulis, approximatis, inferiori majori, subhorizontali; labro acuto, intus tenuiter striato.*

Long. 6 millim.; larg. 3 millim.

Hab. St. Nicolas, isle of Zebu (Philippines).

Jan. 10, 1843.—Richard Owen, Esq., Vice-President, in the Chair.

A portion of a letter from the Rev. W. C. Cotton, addressed to Professor Owen, was read. This letter is dated Waimate, near the Bay of Islands, New Zealand, July 11, 1842, and the portion read refers to the remains of a gigantic bird in New Zealand. The Rev. Mr. Cotton observes, that upon meeting with the Rev. Mr. Wm. Williams, whose missionary station is at the East Cape, Bay of Islands, "I spoke to him about the gigantic New Zealand Bird, of which you described a single bone. Oddly enough, he had a basketful of the bones in the next room, which he immediately

showed to me. He has sent two cases of them to Dr. Buckland, together with a long letter, fully detailing the circumstances under which they were found. I have no doubt but that he will ere this have communicated the letter to you, that is, should it have safely arrived. The bones are very perfect, not at all fossilized; and have been buried in the mud of freshwater streams communicating with high mountains. Mr. Williams had bones of thirty different birds brought to him in a short time after he set the natives about searching for them. One of the largest leg-bones, which measures two feet ten inches, and which has been sent to Dr. Buckland, leads him to think that the bird must have been sixteen feet high! A clergyman who came out in the Tomatia with us is going to be located in the Wairoa, a river about seventy miles south of Poverty Bay, a locality in which these bones have been found in the greatest plenty, and I will commission him to save for me all he can in case you should not have any in the distribution which Dr. Buckland is authorized by Mr. Williams to make. No bones of the wings have been found. The natives have some odd traditions about it, which you will see in the letter. Strangely enough, after Mr. Williams had obtained the bones, he heard of the bird as having been seen by two Englishmen in the Middle Island. They were taken out by a native *at night* to watch for the bird, which he had described to them; they saw it, but were so frightened that they did not dare to shoot at it, though they had gone out expressly to do so. After this I should not be surprised if the Zoological Society were to send out an army to take the monster alive, for alive he most certainly is in my opinion."

A paper was then read from M. Petit de la Saussaye, in which the author describes the following new species of Shells, placed in his hands for that purpose by Hugh Cuming, Esq. Among these, M. Petit observes, are several which in his opinion form a new little group, possessing well-marked characters, and which might be regarded as a subgenus, for which he proposes the name *Elasmatina**.

These shells, which are all terrestrial, form a portion of the great family *Helicidæ*, and appear to be confined to certain islands in the Pacific Ocean. They are of small size, transparent and fragile, and their columella is always furnished at least with one tooth, and sometimes with several teeth. The chief characters are thus expressed by the author:—

ELASMATINA.

Testa ovata, seu turrata, fragilis, pellucida; columella uni-vel pluridentata, dentibus lamelliformibus; labrum tenue, acutum.

ELASMATINA SUBULATA. *Elasm. testâ conico-elongatâ, cylindraced, pellucidâ, dilutè corned; anfractibus decennis, convexis, suturâ lineari, impressâ; apice obtuso; aperturâ obliquè obovatâ; columellâ dente lamelliformi intusque decurrente instructâ; labro tenui, acuto.* Long. 6 mill.; larg. 2 mill.

Hab. Island of Opara, Society Islands.

Found by Mr. Cuming in decayed grass.

* From *ἔλασμα*, lamella.

ELASMATINA CUMINGIANA. *Elasm. testâ ovato-conicâ, pyramidatâ, pellucidâ, dilutè corneo-fuscescente; anfractibus 10-11, subplanulatis, ultimo subangulato; aperturâ semilunari, angustatâ; columellâ bicipitatâ; plicâ superiori obsoletè lamelliformi; inferiori arcuatâ, lamellosâ; labro tenui, acuto.* Long. 6 mill.; larg. $3\frac{1}{4}$ mill.

Hab. Island of Juan Fernandez.

Found by Mr. Cuming on dried herbage.

ELASMATINA RECLUSIANA. *Elasm. testâ oblongo-conicâ, pellucidâ, corneo-fuscescente; anfractibus 9-10, planiusculis; aperturâ semilunari; columellâ basi contorto-plicatâ, plicâ lamellosâ; labro tenui, acuto.* Long. 5 mill.; larg. 2 mill.

Hab. Island of Mas afuera, coast of Chili.

Found by Mr. Cuming under moss in damp situations.

ELASMATINA GLOBOSA. *Elasm. testâ ventricoso-conicâ, pellucidâ, luteo-virescente; anfractibus 6-7, planiusculis, ultimo maximo, ventricoso, pallidiore; spirâ conico-acutâ; aperturâ semilunari, ringente; columellâ suprâ medium dente lamelliformi instructâ, dente subtùs marginato, interdum duplicato, ad basim plicato, plicâ anticè emarginatâ robustè bilobato, lobo superiori ascendente, inferiori subhorizontali; labro acuto.* Long. 4 mill.; larg. 3 mill.

Hab. Island of Opara.

Found by Mr. Cuming under stones.

M. Petit also describes a new shell belonging to the genus *Scarabus* :—

SCARABUS CUMINGIANUS. *Scar. testâ ovato-acutâ, utroque latere compressiusculâ, sordidè fuscescente, longitudinaliter rugoso-striatâ, umblicatâ; anfractibus novenis, planis; spirâ conicâ, lateraliter interdum castaneo-maculatâ; aperturâ longitudinali, margaritacèd, nitente; columellâ tridentatâ, dente superiori longitudinali, anticè truncato, dente mediano crasso, basi obsoletè trilobato, inferiori transverso, lamelliformi; labro crasso, supernè intùs valdè sinuato, quinis dentibus instructo; umbilico intùs clauso.* Long. 29 mill.; larg. 20 mill.

Found by Mr. Cuming at Boljoon (island of Zebu), and at Tanhay, island of Negros.

Mr. Fraser laid before the Meeting some new species of Birds from Fernando Po, which he characterized as follows :—

SYLVICOLA SUPERCILIARIS. *Sylv. ♂ corpore superiore, et lateribus nitidè olivaceis; mento, gulâ, et abdomine medio sordidè albis; lineâ a naribus super oculos, lineâ suboculari, plumis auricularibus, humerorum margine, femoribus, crissoque splendidè flavis; spatio inter oculos rictumque fusco; rostro nigro, pedibus carneis.*

Long. tot. 4 poll.; rostri, $\frac{5}{8}$; alæ, 2; caudæ, $1\frac{1}{2}$; tarsi, $\frac{3}{4}$.

Hab. Clarence, Fernando Po.

The whole of the upper surface and sides of the body, in this bird, are of a bright olive colour; the chin, throat and centre of abdomen are dirty white; a yellow line runs from the nostril over the eye, and

there is a mark under the eye of the same colour; the ears, edge of shoulders, thighs and under tail-coverts are also bright yellow; the space between the eye and the gape is brown; the bill is black and the legs are flesh-colour.

BUCCO SUBSULPHUREUS. *Buc.* ♂ *corpore superiore nigro, strigis superciliari, necnon lineâ frontali sub oculos, et per genas tendente, sulphureis; spatio strigis incluso nigro; corpore inferiore, alarum caudâque tectricibus, secundariis, sic et caudâ flavo-marginatis; alarum tectricibus inferioribus flavido-albis; iridibus corylaceis; rostro nigro, pedibus saturatè plumbeis.*

Long. tot. $3\frac{3}{4}$ poll.; rostri, $\frac{5}{4}$; alæ, 2; caudæ, $1\frac{1}{4}$; tarsi, $\frac{1}{2}$.

Hab. Clarence, Fernando Po.

The upper surface of the head and body is black; superciliary stripe and one across the forehead, which passes under the eye and along the cheek, and the whole of the under surface, sulphureous; space between the superciliary and cheek stripes black; upper wing and tail-coverts, secondaries and tail, margined with yellow; under wing-coverts yellowish white; irides hazel; bill black; legs deep lead-colour.

This bird is like a *Nuthatch* in its habits, being capable of not only running up the trunk of a tree with great agility, but of descending also, head downwards, with equal or even more facility, an act which the *Woodpecker* is, I believe, unable to perform. The tail is short and very soft, and is not used in climbing. Like our European *Sitta*, the downward position seems the most easy and natural. Of the difference of sexes, if any, I am unable to speak, but I have reason to believe the young of this genus differ considerably from the adult*. The *Buccos* are stupid and inactive; I have shot three or four from the same tree, one after the other, without disturbing the rest.

MUSCIPETA (TCHITREA, LESS.) TRICOLOR. *Musc.* ♀ *cristâ, et mento nitidè nigris; corpore superiore cinereo; inferiore rufo, rostro pedibusque pallidè cæruleis; caudâ — ?*

Long. tot. — ? poll.; rostri, $1\frac{3}{8}$; alæ, $3\frac{1}{4}$; caudæ, — ?; tarsi, $\frac{5}{8}$.

Hab. Clarence, Fernando Po (June); in deep moult.

HALCYON LEUCOGASTER. *Halc.* ♂ *vertice nigro, et cæruleo alternatim fasciato, notâ grandi rufo ab utraqûe nari oriente et mand-*

* I have in my collection young specimens of a species of *Bucco*, nearly allied to the above, and in which the body is much spotted and barred, as we so frequently find it in young birds, and wants the decided colouring characteristic of the adults of the present genus. These young birds I feel no doubt constitute a new species, but with such imperfect materials I do not think it desirable to impose a name. The plumage is very soft and loose; the upper parts of the body are of a blackish colour; the crown of the head is adorned with numerous small yellow spots, and the feathers of the back and rump are margined with yellow, giving a barred appearance to these parts; the wing-coverts are narrowly edged with dirty yellow; the under parts of the body are pale inclining to white, but as it were irregularly washed with yellow; the beak is horn-coloured, and the feet are black. These young birds were shot on naked isolated trees.

bula inferioris basim circumdante, necnon aures, et capitis latera, exindè super oculos tendente, et per latera colli corporisque sic et alarum tectrices ductá; dorso splendidè cæruleo, quo colore tectrices alarum marginatæ, alæ, caudaque lavatæ sunt, guld, pectore et abdomine in medio albis; rostro pedibusque rubris.

Long. tot. $5\frac{1}{2}$ poll.; rostri, $1\frac{1}{2}$; alæ, $2\frac{1}{4}$; caudæ, $1\frac{1}{4}$; tarsi, $\frac{4}{12}$.

Hab. Clarence, Fernando Po.

Crown of the head alternately banded with blue and black; from each nostril commences a large patch of rufous, which envelopes the base of the lower mandible, ears, and sides of the head, forms a broad stripe over the eye, and extends along the sides of the neck and body, and also over the under wing-coverts; the back is ultramarine blue; the upper wing-coverts are tipped, and the wings and tail glossed with the same hue; the throat and the centre of the chest and abdomen are white; bill and feet red.

This beautiful species is very closely allied to the *Halcyon cyanotis*, Sw., but may at once be distinguished by the centre of the abdomen being white, which circumstance suggested the name. It is a shy bird.

Mr. Lovell Reeve then communicated a paper by Sylvanus Hanley, Esq., in which the author describes, subjoined, five new species of shells belonging to the genus *Donax*, a group of Acephalous Mollusks.

DONAX SEMISULCATA. *Don. testá abbreviato-cuneiformi, totá albido-lutescente, nitidá, posticè attenuatá, lævigatá, margine dorsali valdè declivi; anticè brevissimá, truncatá, transversim sulcatá et longitudinaliter striatá; margine anteriore subrecto; vulvá decussatá, lateribus subangulatá; intùs margine crenulatá.*

Long. $\frac{2}{3}$ poll.; lat. $\frac{1}{2}$ poll.

Hab. —? Mus. Stainforth, Metcalfe, Hanley, &c.

A very distinctly characterized shell, which bears little resemblance to any other species of this genus, with the exception of the *straminea* of Schrøtter. That rare and almost forgotten shell differs from ours in the following particulars. The shape is altogether more rounded, the ventral edge less arcuated, the edges of the anterior slope rounded, and its transverse striæ obsolete. Moreover the posterior margin is entire.

DONAX PUNCTATO-STRIATA. *Don. testá subtriangulari, valdè convexá, pallidè livido-fuscá, radiatim punctato-striatá, margine dorsali utrinque valdè declivi, ventrali medio arcuato; vulvá longitudinaliter argutè striatá, lateribus obtusis; intùs purpureá, marginibus dentatis; dentibus lateralibus in utrâque valvulá duabus.*

Long. $\frac{2}{3}$ poll.; lat. $1\frac{1}{2}$ poll.

Hab. —? Mus. Stainforth, Metcalfe, Hanley, &c.

Combining the outline of the *striata* of Linnæus (not Chemnitz) with the dotted striæ of *denticulata*, this shell may nevertheless be easily distinguished from either by the obtuse edge of its anterior slope. The inner margin is strongly dentated, excepting at the anterior slope, where it is finely crenulated. I believe that it is found

on the shores of China, but will not venture to assign it *that* or any other locality.

DONAX CARINATA. *Don. testâ elongato-cuneiformi, anticè acuminatâ, convexâ, purpureo-fuscâ, striis longitudinalibus magis minusve distinctis ornatâ (sæpè politâ, radiisque saturatoribus obsolete depictâ); vulvâ obliquè truncatâ, lateribus carinatâ, ferè planulatâ, striisque subgranulatis radiatâ; intùs purpureâ, dentibus lateralibus in utraqve valvulâ duobus, marginibus crenatis.*

Long. $\frac{4}{3}$ poll.; lat. $1\frac{2}{3}$ poll.

Hab. —? Mus. Stainforth, Metcalfe.

A species peculiarly characterized by the very sharp and subrotated angle formed by the ventral edge with the nearly straight edge of the depressed and sharply carinated anterior slope. In the majority of specimens the striæ have become obsolete and the shell brilliantly polished. The general outline bears some little resemblance to that of the true *trunculus* of Linnæus, a very different shell from that erroneously but universally so designated by those who have written on British conchology.

DONAX DENTIFERA. *Don. testâ abbreviato-subtriangulari, posticè rotundatâ, anticè obtusâ et tumidâ, rugis tenuissimis strias longitudinales anticè decussantibus; vulvâ subbiangulatâ, striis tenuibus subgranulatis radiatâ, sulcoque dentifero notatâ; margine ventrali vix arcuato; dentibus cardinalibus et lateralibus in utraqve valvulâ duobus; intùs marginibus crenatis.*

Long. $1\frac{1}{2}$ poll.; lat. $1\frac{3}{8}$ poll.

Hab. —?

The abbreviated shape of this remarkable shell would alone separate it from most of the *Donaces* possessing a crenulated margin. The extraordinary tooth at the extremity of the radiating groove in one valve, which fits into a corresponding notch at the extremity of that of the other, is however its more prominent characteristic. A few teeth show themselves likewise at the extremity of the longitudinal elevated striæ which margin the anterior slope.

The colouring is extremely variable, being uniform flesh-colour, olive-yellow, with the umbones violet, or even white. The interior rivals the exterior in the diversity of its tints.

DONAX PULCHELLA. *Don. testâ transversim elongatâ, convexâ, pelucidâ, politâ, posticè attenuatâ, productâ, anticè brevi; obtusâ, margine ligamentali valdè convexâ; albidd, striis longitudinalibus obsolete anticèque radiis purpureis angustis tribus ornatâ; vulvâ lateribus rotundatâ, striisque tenuibus radiatâ; margine ventrali subrectâ, intùs crenulatâ; dentibus lateralibus valdè approximatis.*

Long. $\frac{1}{2}$ poll.; lat. $\frac{1}{2}$ poll.

Hab. West Indies.

An exceedingly common species from the West Indies, which, from its apparent similarity with the *scalpellum* of Gray, has hitherto remained uncharacterized. Its peculiarly transverse shape, its breadth being considerably more than twice its length, sufficiently distinguishes it from any of the *named* species of this genus, with the

exception of the *Owenii* and *scalpellum*, from which it is separated by its greater convexity and its distinctive colouring.

Mr. Hanley also describes a new species of *MYA* of Linnæus and Lamarck:—

MYA SEMISTRIATA. *Mya testâ ovato-oblongâ, subæquilaterali, ventricosâ, posticè rotundatâ, anticè subtruncatâ et attenuatâ, candidâ, tenui, pellucidâ, longitudinaliter striatâ; striis tenuibus, confertis, anticè elevatis; arâ posticâ striarum experte, transversim rugosâ; dente cardinali obliquo.*

Long. $\frac{3}{2}$ poll. ; lat. 1 poll.

Hab. — ? Mus. Metcalfe.

A single valve, in the cabinet of W. Metcalfe, Esq., is the sole specimen of this elegant and distinct shell I have ever beheld, and forms a welcome addition to a genus possessing so few species as that of *Mya*. Its distinct radiating striæ occupying all but the posterior surface (which is roughened by concentric sublamellar wrinkles), prevent the possibility of its being confounded with any other species, except the *cancellata* of Conrad. But the coarse transverse wrinkles which cover the entire surface of that shell are totally wanting in ours, whilst its radiating striæ are few, indistinct, and by no means its prominent characteristic.

The anterior attenuation is caused by the sloping upwards of the ventral edge. The tooth closely resembles that of *arenaria*, but is more oblique.

January 24.—William Yarrell, Esq., Vice-President, in the Chair.

Professor Owen exhibited various bones, being the remains of a gigantic Struthious Bird (*Dinornis Novæ-Zelandiæ*, Owen) which has become extinct in the North Island of New Zealand, and proceeded to read his notes relating to them.

“ Since the communication to the Zoological Society, Jan. 10th, 1843, of the letter of the Rev. Mr. Cotton, relative to the remains of the gigantic bird of New Zealand which had been collected in the North Island by the Rev. Wm. Williams, one of the boxes of these remains, transmitted by that gentleman to Prof. Buckland, has been received, and the specimens have been kindly placed in my hands for description.

“ An entire femur, somewhat larger than that of which the shaft is described and figured in the Society’s Transactions, proves the specific identity of the present remains with the fragment, upon which I ventured to affirm, three years ago*, that a large Struthious Bird ‘of a heavier and more sluggish species than the Ostrich’ had recently become extinct, if it were not still living, in New Zealand.

“ The femur has very nearly the same proportions of thickness to length as in the Ostrich, but the shaft is less compressed; it consequently differs from that of the Apteryx in being shorter in proportion to its thickness; but it resembles the femur of the Apteryx, and

* The memoir was communicated to the Zoological Society November 12th, 1839, vol. iii. p. 32. pl. 3.

differs from that of the Ostrich and Emeu in the important character of the absence of the air-hole at the back part of the neck, and the consequent substitution of marrow for air in the interior of the bone. It differs from the femur of the Ostrich, and agrees with that of the Apteryx, in the greater width of the anterior interspace of the condyles; but it differs from that of the Apteryx, not only in size and general proportions, but also in the form of the distal extremity, which has a deeper posterior intercondyloid depression, and a sharper and more produced posterior part of the outer condyle.

“The length of the above femur of the great bird of New Zealand is eleven inches; the circumference of the middle of the shaft five and a half inches: but the present collection includes the shaft of a femur of another individual, with a circumference of seven and a half inches.

“The most perfect tibia in the present collection measures two feet four and a half inches in length, and apparently corresponds in proportion with the fragment of the larger femur. Now allowing that femur fourteen inches of entire length, the tibia is then twice the length of the femur, while in the Apteryx the tibia is only one-third longer than the femur. The larger *Struthionidæ*, as the Ostrich and Emeu, more nearly resemble the great New Zealand Bird in the proportion of their tibia, but it is not quite twice the length of the femur in those species. The tibia of the great New Zealand Bird differs from that of the Apteryx and all the large *Struthionidæ* in the complete osseous canal for the passage of an extensor tendon in the anterior concavity above the distal condyles. This osseous canal is commonly found in the tibia of the *Grallæ*, *Gallinæ*, *Anseres*, and many smaller birds. The proportion of length to thickness of the tibia is nearly the same in the Ostrich and the great New Zealand Bird; the circumference of the tibia at its proximal end, in the latter, is fifteen inches; at its middle, five inches.

“The most instructive bone in the present collection is a tarso-metatarsal bone, with the distal extremity entire, showing that the gigantic bird was tridactyle, like the Emeu, Rhea, and Cassowary. The remains of the proximal end of the bone prove it to have been articulated with a tibia about an eighth part shorter than the one above described, or to a tibia about two feet in length; the length of the tarso-metatarsal bone is one foot, or half the length of the tibia, which is exactly the proportion which the tarso-metatarsal bone of the Apteryx bears to the tibia. In the Emeu the tarso-metatarsal bone is as large as the tibia; in the Ostrich it is a little shorter than the tibia. The difference in the proportions of the tarso-metatarsal bone of the gigantic bird of New Zealand and of the Emeu will be obvious from the following dimensions:—

	<i>Dinornis.</i>		<i>Dromaius.</i>	
	in.	lin.	in.	lin.
Tarso-metatarsal bone.				
Length	12	0	14	6
Circumference of middle	4	5	2	8
Breadth of distal end	3	10	2	10

“The comparative shortness and strength of the trifold metatarsal

of the gigantic New Zealand Bird form its most striking resemblance to the Apteryx, to which it thus approximates more closely than to any of the large existing *Struthionidæ*.

“The proportions of the leg-bones, their denser texture, especially that of the femur, which, as in the Apteryx, contains no air, sufficiently indicate the generic distinction of the great New Zealand Bird from the tridactyle Emeu, Rhea, or Cassowary. The questions then arise,—is it likewise generically distinct from the *Apteryx*? or is it a gigantic species of that genus? These questions are determined by the tarso-metatarsal bone. The Apteryx is distinguished from the other *Struthionidæ* not more by its elongated bill than by the presence of a fourth small toe on the inner and back part of the foot, articulated to a slightly elevated rough surface of the tarso-metatarsal about a fourth of the length of that bone from its trifid distal end. There is no trace of this articular surface on the tarso-metatarsal of the Gigantic Bird, which was consequently tridactyle, as in the Emeu, Rhea, and Cassowary. The Dodo was tetradactyle, like the Apteryx: the shorter proportions of the legs of the Dodo also distinguish it from the Gigantic Bird, whose career in the North Island of New Zealand was probably closed about the same period as that of the Dodo’s existence in the Isle of Rodriguez.

“The fragments of the pelvis prove this to have been relatively broader, behind the acetabula, than in the Ostrich, Emeu, or Apteryx, its proportions being more like those of the Bustard.

“The results of the foregoing comparisons justify the reference of the Great Bird of New Zealand to a distinct genus in the Struthious order, for which I propose the name *Dinornis*, with the specific appellation *Novæ Zealandiæ*.

“The extraordinary size of the tibia above described—still more that of the tibia said to measure two feet ten inches in length, obtained by Mr. W. Williams, and mentioned in his letter to Dr. Buckland—prove the *Dinornis* of *New Zealand* to be the most gigantic of known birds. There is little probability that it will ever be found, whether living or extinct, in any other part of the world than the islands of New Zealand, or parts adjacent. At all events, the *Dinornis Novæ Zealandiæ* will always remain one of the most extraordinary of the zoological facts in the history of those islands; and it may not be saying too much to characterize it as one of the most remarkable acquisitions to Zoology in general which the present century has produced.”

Mr. Ogilby then communicated his descriptions of two new species of Baboon:—

“When at Frankfort in the year 1837 I saw in the museum of that city two Baboons of the genus *Cynocephalus*, which my friend Dr. Rüppell had brought from Abyssinia. They were however confounded with the ‘Babouin’ of the French authors (*C. sphinx*), under which name they are noticed in the ‘*Neue Wirbelthiere*’; and though I was too well acquainted with that species, from having frequently seen an individual then living in the Surrey Zoological Gardens, to

fall into the same error, I yet committed the similar mistake of confounding the Frankfort animals with *C. anubis*, of which there was no specimen at hand to compare them with. Since that time I have had frequent opportunities of observing the latter species, which is an inhabitant of the coast of Guinea, and not uncommon in our museums and menageries; but it is only within the last few days that the acquisition of a fine adult male specimen of Dr. Rüppell's animal by the Zoological Society has enabled me to compare them together, and to ascertain their specific distinction. Both species are now living in the Society's Gardens, and offer a rare and valuable opportunity for studying their characters.

"The Abyssinian species, which was reported to have been brought from Bombay, but which had no doubt been carried thither on board some vessel trading to the Red Sea, possesses a higher degree of interest than attaches to any other Cynocephal. With the exception of *C. hamadryas*, it is the only known species in that part of Africa, and must consequently have been the animal which we find so frequently figured among the hieroglyphics, and which was worshiped by the Egyptians under the name of *Thoth*. I have shown elsewhere (Nat. Hist. of Monkeys, &c., i. 431) that the Sacred Baboon of the Egyptians was not the *C. hamadryas*, as supposed by Ehrenberg; and though, from the mistake above alluded to, I was at that time inclined to identify it with *C. anubis*, there can now be no reasonable doubt that the animal which played so important a part in the mythology of that remarkable people, and of whose worship the city of Hermopolis was the principal seat, must have been the species at present under consideration. If this conjecture be well-founded, it follows also that the names *cynocephalus*, *sphinx*, &c., so often employed by Greek and Roman writers, must have referred to the same animal, at least originally; but as modern zoologists have applied all these names in a definite sense, I propose to distinguish the new species by the equally appropriate designation which it bore among the ancient Egyptians.

"*Cynocephalus Thoth*.—The individual from which this description was taken is an old male of large size, and, like the rest of his congeners, of a morose intractable disposition. The face is broad and of a dirty livid flesh-colour, lighter along the centre and ridge of the nose, and somewhat browner on the cheeks and muzzle; the cheek-bones are protuberant, the rostrum truncated, and the extremity of the nose reaching, but not surpassing, the plane of the upper lip and teeth. The hair of the fore-quarters is longer and thicker than on the rest of the body, though it does not form so dense or copious a mane as in *C. hamadryas*. The colour of the upper and outer parts of the body may be described as dark olive-green, and that of the lower and interior as light yellowish green; the breast, throat and under part of the chin are silvery grey; the lower parts of the whiskers are of the same colour, but they acquire a yellowish green shade as they approach and become intermixed with the hair of the head; the ears and palms of the hands are naked, and of a dark brown colour; the callosities very large and flesh-coloured, and the naked

parts of the hips on each side of the callosities of a deep purple or violet-brown; the scrotum is brown, and the sheath of the penis flesh-coloured. The tail is of medium length, without a terminal tuft, and carried in the arched manner common to the rest of the genus. The hind surfaces of the legs and thighs are furnished with long hair of a yellowish brown shade; the hands are of the same colour as the body, but the hind fingers are covered with longish grey hairs, and this character, together with the dark purple colour of the naked hips and brown scrotum, will always be sufficient to distinguish the present species from *C. anubis* and *C. sphinx*, in both of which the naked parts of the buttocks are of a brilliant blood-red, and the scrotum pale flesh-colour. In colour indeed *C. Thoth* approaches more nearly to *C. sphinx* than to *C. anubis*; it has the same light silvery grey colour on the whiskers and under part of the body, but the upper colours are more obscure; the bright yellowish green is replaced by sordid dunnish brown, and the proportions of the two animals are entirely different, the long slender limbs and body of the *sphinx* contrasting strongly with the massive thick-set form of the present species.

“There is likewise in the Society’s Gardens a second undescribed species of *Cynocephal*, of which I remember to have formerly seen a specimen in Wombwell’s collection, but unfortunately neglected to take a note of it at the time. The individual which I am now about to describe was brought from the Niger Expedition, and presented to the Society by Lieutenant Webb, R.N. It is a semiadult male, of medium size, covered on every part of the body, both above and below, with long shaggy hair of a deep russet-brown colour, each hair being annulated with rusty-brown and black rings; and I may remark, that this and *C. anubis* are the only species in which I have observed that the hair of the breast and belly are similarly annulated, and almost as thickly furnished as that on the back and sides; the whiskers are likewise bushy, of the same colour as the hair of the back, and similarly annulated; but it should be observed, that from the very dark shade of the colours the annuli are but little conspicuous anywhere. The face is more slender and tapering than in any other male *Cynocephal* that I have ever seen; the cheek-bones are but little prominent, but the nose sensibly surpasses the extremity of the muzzle. The face and space surrounding the eyes are black or dark brown, the upper eyelids alone flesh-coloured; the ears and palms of the hands, as are likewise the upper sides of the fingers, the scrotum, callosities, and naked parts of the buttocks, are of the same colour. The hair of the head, whiskers and fore-parts generally is erect and bushy, and completely conceals the ears. This species is allied to *C. anubis*, but differs from it in the colour of the hair, in the absence of the light flesh-coloured circle about the eyes, and in the dark brown instead of blood-red colour of the callosities and naked parts of the buttocks. I propose to distinguish it by the name of *C. choras*, a name which is applied to this or some other species of *Baboon* on the west coast of Africa, and which has a sufficiently classical form to escape the censure of barbarism, notwithstanding its origin.”

Descriptions of four new species of *Conus*, a genus of Pectinibranchiate Mollusks, by Mr. Lovell Reeve, were then read.

1. *CONUS STAINFORTHII*. *Con. testâ conico-turbinatâ, leviter flexuosa, albâ, rubro purpureoque tinctâ, ad basin rosaced; granosâ, granis minutis, rubido carneove-albis, in seriebus equidistantibus parallelis transversaliter dispositis; spirâ mediocriter convexâ, tuberculis aspersis regulariter coronatâ; apice mucronato, symmetricè acuto; aperturâ subinflatâ, labro solidiusculo, intus extûsqe albo.*
 Conch. Icon. pl. 1. f. 1.

The richly variegated purple painting of this new and very beautiful shell (which I dedicate to its fortunate possessor), and the rows of light small granular pimples standing out in relief, render it eminently characteristic. There is another specimen in Mr. Cuming's collection.

Hab. Unknown.

2. *CONUS LIGNARIUS*. *Con. testâ oblongo-turbinatâ, luteo-fuscâ, fusco indistinctè bifasciatâ, longitudinaliter subtilissimè striatâ, filis tenuissimis rubellis densissimè cingulatâ; basi striatâ; spirâ planiusculâ, apice elato, acuto.*

Conch. Icon. pl. 15.

This shell, which is of an uniform brown colour, profusely corded and lined, both transversely and longitudinally, was found by Mr. Cuming on mud-banks just below low-water mark at Port Sacloban, Island of Leyte, Philippines.

3. *CONUS MAGNIFICUS*. *Con. testâ cylindraceo-turbinatâ, obesâ, anfractibus supernè rotundatis, spirâ lævi, subacuminatâ, apice valdè obtuso; rosaced, lineis ovato-trigonis, lacco aut purpureo-rubris, usquequaque reticulatâ, maculis perpaucis grandissimis bifasciatim cinctâ.*

Conch. Icon. pl. 6. f. 32.

This beautiful shell, which always exhibits a warm rosaceous tint, was collected by Mr. Cuming at Matnog, Island of Luçon, Philippines.

4. *CONUS NEPTUNUS*. *Con. testâ elongato-conicâ, spirâ acuminatâ, striatâ, apice acuto; pallidè carneold, lineis maculisque rubidis ubique nebulosâ et venosâ; versus basin leviter sulcatâ, sulcis subdistantibus; columellâ et aperturæ fauce subrosaced.*

Conch. Icon. pl. 6. f. 30.

Hab. Jacna, Island of Bohol.

The delicate marking of this gem approaches so nearly to that of the *Conus gloria-maris*, that we honour it with as noble a title.

BOTANICAL SOCIETY OF LONDON.

Oct. 6, 1843.—John Reynolds, Esq., Treasurer, in the Chair.

Mr. Adam Gerard exhibited a collection of fruits and seeds from Sierra Leone, containing specimens of the fruits of the Butter and Tallow Tree (*Pentadesma butyraceæ*).

Read "Notes of a Botanical Excursion to Tilgate Forest in August last," by the Chairman.

Nov. 3.—Hewett Cottrell Watson, Esq., V.P., F.L.S., in the Chair.

The following papers were read: "On the Botany of Lichfield," by the Rev. Richard Garnett; "Notes on a species of *Cuscuta* found at Duxford, Cambridgeshire," by Mr. Frederick Bond.

The Chairman presented a series of specimens of the Common Birch, in order to show that the forms described by different authors under the names of *Betula alba*, *pendula*, *glutinosa* and *pubescens* are only varieties of one single species, the original *Betula alba* of Linnaeus. Mr. Watson stated that he had repeatedly found on different branches of the same tree, the various forms of leaf and other characters which were given as the distinctions between these supposed species; and that the leaves of *Betula glutinosa* or *pubescens* were produced usually (if not always) on the seedling plants of *Betula alba* or *pendula*.

Mr. Edward Doubleday presented specimens of *Primula elatior* from the Bardfield Station. These specimens were remarkable for the wide variation in the relative length of the calyx and corolla, and also in the form of the leaves, some specimens resembling the primrose in their tapering leaves, while others had the abruptly contracted leaves similar to those of the cowslip. It was announced that the Herbarium of the Society might be inspected every Friday evening from seven to ten.

Specimens of *Barkhausia setosa*, DeC., were exhibited, one of which was presented by Mr. Cumming in 1841, collected by him at Audley End, Essex. The other was presented by Mr. G. S. Gibson, and was collected by him in a field near Sampford, Essex, in 1843.

BOTANICAL SOCIETY OF EDINBURGH.

This Society held its first meeting for the season on Thursday, November 9, Dr. Neill in the Chair.

Professor Graham read an account of a botanical excursion, undertaken with some of his pupils in August last, to North Wales, the principal feature of which was the extreme paucity of the Alpine vegetation as compared with that on the Grampian ranges; and the great interest of the products in the Welsh valleys, when contrasted with the vegetation of low levels among the Scottish mountains.

Dr. Graham also read a notice by Dr. Bell Salter, of some recent additions to the flora of the Isle of Wight, and of the many species or varieties of *Rubi* occurring in that island, one of which, considered by Dr. Salter to be *Rubus suberectus*, was particularly interesting from its size, almost reaching that of a small tree, and with leaves above six inches in length.

Mr. Brand read a communication from Dr. W. H. Campbell respecting the Eta palm wood of British Guiana, which is of extreme lightness, and is used in the colony, among other things, for sharpening razors, &c., probably owing to its containing much *silex*. Dr. Campbell also mentioned several other kinds of wood equally remarkable for their solidity and weight, for their great beauty, and for the high prices they fetch in this country for veneering and other ornamental cabinet work.